

Resources and other success stories



Top: Students, teachers and sponsors from a Wisconsin Be SMART Coalition program. Photo courtesy Be SMART.



Left: Construction workers recycle metal on a building site. Photo courtesy WasteCap Wisconsin.



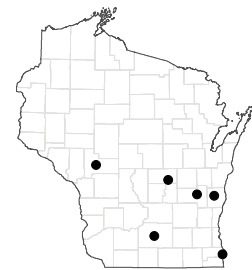
Left: Participants in the Madison Metropolitan School District's April 2005 waste sort.

Right: Volunteers sort waste at Spring Harbor Middle School in Madison. Photos courtesy MMSD.



Badger State Industries

Madison, WI (main office)



Using waste cooking oil from correctional facility kitchens to produce biodiesel is the latest recycling initiative from Badger State Industries (BSI), which has also been recycling and refurbishing computers and wheelchairs for several years.

BSI, the Wisconsin Department of Corrections vocational training and work skills development program, operates furniture, printing, textile and laundry shops at 11 state correctional institutions. In recent years, it has added computer and wheelchair recycling projects, employing about 100 inmates at facilities in Black River Falls, Fond du Lac, Plymouth, Racine and Redgranite.

The computer recycling program, which BSI estimates keeps up to 5 million pounds of equipment per year out of the landfill, began in 1996 with help from a DNR grant. Donations come from more than 200 schools, government agencies, nonprofits and private citizens.

Usable computer systems are refurbished and donated, with hard drives wiped clean to ensure data security. Unusable equipment is sorted and recycled by commodity. BSI partners with private industry and the UW-Madison SWAP (Surplus With a Purpose) to handle some surplus materials.



Badger State Industries plans to use a small commercial biodiesel processor such as this one to convert used cooking oil into biodiesel for delivery trucks. Photo courtesy BSI.

Quick facts: BSI

Recycled materials used: computer equipment, wheelchairs and handicapped bathroom equipment, cooking oil

Recycling start date: 1996 for computers; 2006 for public wheelchair recycling

Number of employees: 100 inmates

Contact: Tim Brown, Timothy.Brown@doc.state.wi.us

Web site: www.buybsi.com

In addition to the environmental benefits, Bernie Spiegel, director of prison industries, said there is a strong educational component to the refurbishing program, including a partnership with three community colleges to provide training and course credit for inmates.

The wheelchair recycling program takes in manual and automatic wheelchairs and handicapped bathroom equipment. All of the equipment is completely disassembled, cleaned, refurbished and reassembled, with broken or unusable equipment recycled. Madison Wheelchair Recycling then offers the refurbished equipment to individuals for a small donation.

BSI's newest initiative is to use waste cooking oil from its correctional institutions to produce biodiesel to fuel delivery trucks and farm equipment. BSI has been pilot-testing a blend of 20% biodiesel and 80% #2 diesel in one of its delivery trucks, and has found it not only saves fuel and reduces emissions, but also reduces engine wear through its lubricating properties, according to BSI's Paul Anderson. He estimated that the biodiesel mixture could save \$84 per week in fuel costs per truck.

Spiegel and other BSI staff members said their programs are intended to supplement and complement private industry, not compete with other recyclers. Still, BSI staff are excited about the possibilities.

"We've really taken recycling as one of the bigger parts of our future," Spiegel said. ■



Madison Metropolitan School District

Madison, WI

Sorting through the garbage may seem like an odd way to look for money, but that's essentially what the Madison Metropolitan School District (MMSD) did in April 2005. The district conducted a "waste sort" in four of its 46 schools as part of a DNR Solid Waste Reduction and Recycling Demonstration grant.

The sort revealed that a significant amount of recyclable material (ranging from 19% to 36% of the total garbage) was ending up in the trash and therefore adding to the district's landfill tipping fees.

"It certainly has been educational," said district building services director Doug Pearson of the district's waste-reduction project. Pearson said he was surprised at the number of recyclables he found in



MMSD building services director Doug Pearson weighs trash from a waste sort in April 2005. Photo courtesy Madison Metropolitan School District.

A waste sort in 2005 revealed that up to 35% of Madison schools' trash might be recyclable.

the trash during the waste sorts.

MMSD has been active in recycling for some time, Pearson said, but in looking to the future, it wanted to make changes and reduce costs for waste hauling and recycling. Pearson said environmental values played a role as well. "We are attempting to be one of the greenest schools in the country with our recycling and energy conservation efforts," he said.

Quick facts: MMSD

Recycled materials collected: cans, bottles, paper and other household recyclables

District size: 25,000 students in 46 schools

Contact: Doug Pearson, 608.204.7909, dpearson@madison.k12.wi.us

Web site: www.madison.k12.wi.us/bldgsrv/

Through February 2006, the DNR grant funded the purchase of 251 additional recycling containers and \$2,000 worth of outreach materials in the four model schools. Each model school has a recycling coordinator who makes decisions about the types of outreach materials (such as signs, posters and buttons) to use.

Pearson said the district would continue education efforts and collecting data throughout the 2005-'06 school year, after which he would analyze the data to see if district-wide garbage collection has changed and talk with staff about how the program could be improved. As part of its grant activities, the district will produce a video outlining the program and steps other schools can take for waste reduction.

In future years, the district hopes to increase the number and size of recycling containers in all of its schools. Pearson said some of the challenges with expanding recycling efforts will be costs, including the purchase of containers and labor costs for emptying them.

With annual tipping fees of around \$80,000, there is the potential for significant savings if all recyclable materials are kept out of the trash, Pearson said. But change will require education. "The big challenge is to get the message across to students," Pearson said. ■

Trig's Foods

Minocqua, WI (recycling center)



“The drive-through recycling center in Minocqua is convenient enough to leave no excuse for not recycling,” said Russell Hills, director of transportation for Trig’s Foods.

Trig’s is a multi-location conglomerate of supermarkets, gas stations and restaurants that is pioneering a recycling movement in the north woods of Wisconsin. Minocqua is also home to Trig’s drive-through recycling center, which has been operating for 13 years and is used both by small area businesses and families.

Hills and other Trig’s employees saw in Minocqua a clear need for a customer-friendly recycling center. Instead of utilizing an imposing Dumpster at the end of a vacation-home driveway, the public can visit the recycling center, which collects all sorts of recyclables from the public at no charge.

Free use of the recycling center is a financial benefit that can help Minocqua visitors and residents avoid paying a fee to disposal companies. “The recycling center is an extension of Trig’s positive customer service,” Hills said.

The recycling center collects and bales recyclables, then brokers out recyclables by the semi-load to a variety of companies, including metal, fiber and resin



Trig’s drive-through recycling center brings convenient and affordable recycling to Minocqua’s families, visitors and small businesses. Photo courtesy Trig’s Foods.

Quick facts: Trig’s Foods

Recycled materials collected: everything except hazardous waste, including shopping bags, plastic food containers, shrink wrap, cardboard, paper, vegetable oil

Recycling start date: recycling center opened in 1993

Number of employees: 14 in recycling center; many more throughout Trig’s locations

Contact: Russell Hills

Web site: www.trigs.com

processors. The center also accepts less profitable recyclables, such as glass, and often pays processors to accept shipments of these materials.

Hills emphasized that a true recycling center must exercise ‘complete recycling’ by accepting profitable and

“The recycling center is an extension of Trig’s positive customer service,” Hills said.

non-profitable materials. He said the company’s recycling center is challenged by a competitive industry in which markets are influenced by profitable recycling centers and greatly fluctuating demand for certain recyclables, such as petroleum-based products like plastic.

The company’s responsible recycling practices extend well beyond its recycling center. Vegetable oil from the company’s restaurants and delis is recycled and can be used as vehicle fuel. Day-old bread and bakery items are kept from the landfill and donated to local food pantries. Customers have access to recycling containers at all store locations and are paid five cents for each reused bag. Trig’s is making recycling a reality on all levels of their organization and is infusing the concept of responsible reuse throughout area communities. ■



WasteCap Wisconsin

Milwaukee and Madison, WI

More than 1 million tons of construction and demolition (C&D) waste ends up in Wisconsin landfills each year, according to a 2002 DNR study. WasteCap Wisconsin is working with businesses to try and change that, saving money and resources in the process.

Founded in 1996, WasteCap is a nonprofit organization with more than 70 member businesses, organizations and individuals. Its seven employees provide education, training and information-sharing opportunities to businesses in an effort to help them reduce waste and increase recycling.

WasteCap has saved its clients over \$1 million in avoided disposal costs.

While food waste and electronics recycling are also part of its mission, the majority of the organization's current work is in the area of C&D waste and recycling. Usually, this involves assisting an individual contractor or owner. "We're teaching them hands-on how to set up recycling programs on-site," said Susan Buchanan, WasteCap's executive director.

The organization has helped set up recycling programs for several large construction projects around the state, including the Epic Systems campus in Verona, the Overture Center in Madison, and the Weston 4 power plant in Wausau.

For each project, WasteCap has helped contractors reuse or recycle large amounts of metal, wood, cardboard, concrete and other materials, with significant cost savings. Through April 2006, it had saved its clients over \$1 million in avoided disposal costs and diverted more than 73 million pounds (36,500 tons) from the landfill.

WasteCap often partners with governments, foundations and businesses to develop markets for materials such as vinyl siding or drywall scrap. It has received DNR Solid Waste Reduction and Recycling Demonstration grants to

Quick facts: WasteCap Wisconsin

Areas of recycling focus: construction & demolition waste, electronics, food waste

Start date: 1996

Number of employees: 7

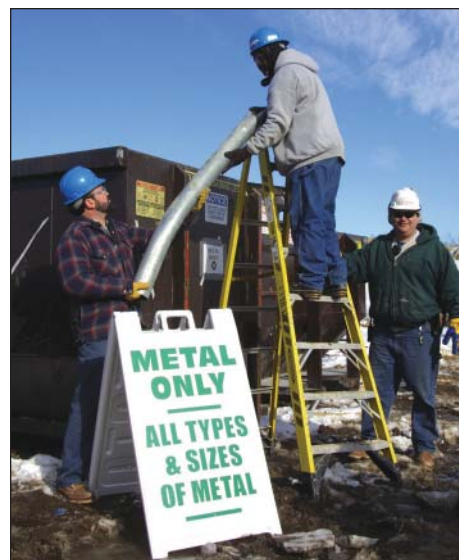
Contact: Susan Buchanan, sbuchanan@wastecapwi.org

Web site: www.wastecapwi.org

help with these projects. "As the markets appear, we do the research and try to put the permitting together to develop the markets," Buchanan said.

WasteCap has also worked with the U.S. Environmental Protection Agency to develop a new accreditation program in C&D recycling for construction professionals.

Buchanan said recycling programs can be hard to get off the ground. "The challenge by far is education ... really getting people to understand how to recycle and why to recycle and providing incentives to workers on these projects to recycle," she said. Once builders see the benefits, though, a program takes off. "They're really seeing this as the wave of the future," Buchanan said. ■



Workers recycle metal on one of WasteCap's projects. Photo courtesy WasteCap Wisconsin.

Wisconsin Be SMART Coalition

Southeast WI

The Wisconsin Be SMART (Save Money and Reduce Trash) Coalition is a partnership of local communities, state agencies, non-profit and environmental organizations, and businesses that provide leadership and promote actions that reduce waste, conserve resources, prevent pollution and foster sustainability in Wisconsin.

“We are a group of people working toward a goal of waste reduction,” said Be SMART chair Karen Fiedler. “Our coalition is pretty unique. I haven’t seen it anywhere else, where a group comes together to educate the public on waste reduction, and then promote specific action.”

“Our coalition is pretty unique. I haven’t seen it anywhere else,” Fiedler said.

Waste reduction is anything that reduces waste by using less material in the first place, according to Be SMART. It is doing simple things like using both sides of a sheet of paper, using reusable mugs instead of disposable cups or buying in bulk rather than individually packaged items. The end result is money saved, resources conserved, pollution reduced and landfill space saved.

“We started in 1995 as the Southeast Wisconsin Waste Reduction Coalition,” Fiedler said. “When the Wisconsin recycling law was passed, everybody was focused on recycling; no one focused on reduction.

Quick facts: WI Be SMART

Areas of recycling focus: waste reduction; improving recycling away from home

Start date: 1995

Contact: Karen Fiedler or Karin Sieg,
1-800-91SMART

Web site: www.besmart.org



The cover from a recent Green Pages, one of Wisconsin Be SMART coalition's initiatives to raise awareness about waste reduction and recycling. Photo by Erol Reyat and courtesy Wisconsin Be SMART Coalition.

So reduction became our mission.”

Since its inception, the organization has been a warehouse of resources for the public for waste reduction, recycling and other related topics, which can be found on its Web site, www.besmart.org.

One such resource is “How to Recycle Away From Home.” State and local grants have helped the organization research ways to improve recycling “away from home” at places such as special events, and at work. The DNR recently awarded Be SMART a two-year Solid Waste Reduction and Recycling Demonstration grant to produce and distribute a Web-based “away from home” recycling toolkit.

The organization produces the annual “Green Pages” in the Milwaukee Journal Sentinel and Earth Day sections in two Jefferson County newspapers. “We’d love to see this go state-wide in other state newspapers,” Fiedler said.

Be SMART also sponsors a conservation scholarship challenge for southeast Wisconsin high school and college students to plan and implement waste reduction projects. Fiedler said in the future she’d like additional sponsors to expand this program state-wide. ■

Index by company name

Badger State Industries	42
The Bruce Company of Wisconsin, Inc.	17
Cascade Asset Management, LLC	18
CBT Wear Parts, Inc.	19
CRT Processing Corporation	20
Faherty Inc.	21
Georgia-Pacific	22
Goodwill Industries of South Central Wisconsin	23
Habitat for Humanity of Dane County ReStore	24
Humane Manufacturing Company LLC	25
Kohler Company	26
Madison Metropolitan School District	43
Miller Brewing Company	27
Minergy Corp.	28
N.E.W. Plastics Corp.	29
Packaging Corporation of America	30
Plymouth Foam Incorporated	31
Printpack Inc.	32
Sadoff & Rudoy Industries, LLP	33
Saint-Gobain Containers	34
Samuels Recycling Company	35
SCA Tissue	36
Trig's Foods	44
Veridian Homes	37
WasteCap Wisconsin	45
Wausau Tile	38
Wisconsin Be SMART Coalition	46
Wisconsin Paperboard Corp.	39

Index by county

Brown

Georgia-Pacific, Green Bay
Sadoff & Rudoy Industries, LLP, Green Bay
Samuels Recycling Company, Green Bay

Columbia

Goodwill Industries of SC Wisconsin, Portage
Samuels Recycling Company, Portage

Dane

The Bruce Company of Wisconsin, Inc., Middleton
Badger State Industries, Madison
Cascade Asset Management, LLC, Madison
Goodwill Industries of SC WI, Madison and Monona
Habitat for Humanity of Dane Co. ReStore, Madison
Madison Metropolitan School District, Madison
Sadoff & Rudoy Industries, LLP, Madison
Samuels Recycling Company, Madison
Veridian Homes, Madison

Dodge

Samuels Recycling Company, Beaver Dam

Fond du Lac

Badger State Industries, Fond du Lac
Sadoff & Rudoy Industries, LLP, Fond du Lac
Samuels Recycling Company, Waupun

Grant

Faherty Inc., Platteville

Jackson

Badger State Industries, Black River Falls

Jefferson

Goodwill Industries of SC Wisconsin, Fort Atkinson

Kewaunee

N.E.W. Plastics Corp., Luxemburg

Lincoln

Packaging Corporation of America, Tomahawk

Manitowoc

Sadoff & Rudoy Industries, LLP, Manitowoc

Marathon

Georgia-Pacific, Wausau
Sadoff & Rudoy Industries, LLP, Schofield
Trig's Foods, Wausau
Wausau Tile, Wausau

Milwaukee

22 Miller Brewing Company, Milwaukee
33 Sadoff & Rudoy Industries, LLP, Franklin
35 WasteCap Wisconsin, Inc., Milwaukee
45 Wisconsin Be SMART Coalition, Waukesha
46 Wisconsin Paperboard Corp., Milwaukee
39

Oneida

Printpack Inc., Rhinelander
Trig's Foods, Minocqua and Rhinelander
44

Price

Georgia-Pacific, Phillips
22

Portage

Trig's Foods, Stevens Points
44

Racine

37 Badger State Industries, Racine
Saint-Gobain Containers, Burlington
34

Richland

35 CBT Wear Parts, Inc., Richland Center
19 Goodwill Industries of SC Wisconsin, Richland Center
23

Rock

35 CRT Processing Corporation, Janesville
20 Humane Manufacturing Company LLC, Janesville
25 Samuels Recycling Company, Janesville
35

Sauk

Humane Manufacturing Company LLC, Baraboo
25

Sheboygan

Badger State Industries, Plymouth
42 Georgia-Pacific, Sheboygan
22 Kohler Company, Kohler
26 Plymouth Foam Incorporated, Plymouth
31

Vilas

Trig's Foods, Eagle River
44

Waushara

Badger State Industries, Redgranite
42

Winnebago

22 Georgia-Pacific, Neenah and Oshkosh
28 Minergy Corp., Neenah
33 SCA Tissue, Neenah and Menasha
36

Index by material

Construction and demolition debris

The Bruce Company of Wisconsin, Inc. 17
Habitat for Humanity of Dane County ReStore 24
Veridian Homes 37
WasteCap Wisconsin 45

Electronics

Badger State Industries 42
Cascade Asset Management, LLC 18
CRT Processing Corporation 20
Faherty Inc. 21
Goodwill Industries of South Central Wisconsin 23
WasteCap Wisconsin 45

Glass

CRT Processing Corporation 20
Faherty Inc. 21
Madison Metropolitan School District 43
Miller Brewing Company 27
Minergy Corp. 28
Saint-Gobain Containers 34
Trig's Foods 44
Wausau Tile 38

Industrial materials (byproducts)

Kohler Company 26
Miller Brewing Company 27
Minergy Corp. 28
Packaging Corporation of America 30
Printpack Inc. 32

Metals

Faherty Inc. 21
Kohler Company 26
Madison Metropolitan School District 43
Miller Brewing Company 27
Sadoff & Rudoy Industries, LLP 33
Samuels Recycling Company 35
Trig's Foods 44

Motor vehicle items (tires)

Humane Manufacturing Company LLC. 25

Organics (food and yard waste)

Badger State Industries 42
The Bruce Company of Wisconsin, Inc. 17
CBT Wear Parts, Inc. 19

Miller Brewing Company 27
Trig's Foods 44
WasteCap Wisconsin 45

Pallets

Faherty Inc. 21
Miller Brewing Company 27

Paper/cardboard

Faherty Inc. 21
Georgia-Pacific 22
Kohler Company 26
Madison Metropolitan School District 43
Packaging Corporation of America 30
Printpack Inc. 32
SCA Tissue 36
Trig's Foods 44
Veridian Homes 37
WasteCap Wisconsin 45
Wisconsin Paperboard Corp. 39

Plastic

Faherty Inc. 21
Madison Metropolitan School District 43
Miller Brewing Company 27
N.E.W. Plastics Corp. 29
Plymouth Foam Incorporated 31
Printpack Inc. 32
Trig's Foods 44

Reusable materials

Badger State Industries 42
Cascade Asset Management, LLC 18
Goodwill Industries of South Central Wisconsin 23
Habitat for Humanity of Dane County ReStore 24

Other materials

CBT Wear Parts, Inc. 19
Faherty Inc. 21
Miller Brewing Company 27
Packaging Corporation of America 30
Trig's Foods 44
Wisconsin Be SMART Coalition 46

* Note: additional companies may recycle common materials such as glass and paper; they are listed here based on materials specifically mentioned in their profiles.



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